June 19, 1992 CD-92-04 (LDV, LDT)

Dear Manufacturer:

SUBJECT: Manufacturer Use of Alternative Test Equipment

Questions have recently arisen concerning the types of equipment manufacturers must use when conducting EPA emission and fuel economy tests. I am writing today to re-emphasize EPA's long standing policy in this area.

To conduct valid emission and fuel economy tests, manufacturers must use equipment meeting the design criteria specified in the regulations. However, the regulations do not require manufacturers to use equipment of the same brand, model, or exact configuration as the equipment used at the EPA laboratory. EPA has historically assured the accuracy of manufacturers' test results by constantly monitoring the correlation between each manufacturer and EPA. A number of manufacturers use equipment that is different from EPA and maintain acceptable correlation. Specifically, with regard to dynamometers, some manufacturers use machines having different roll sizes as allowed under the authority of 40 CFR 86.108-79. Also, EPA has historically cooperated with manufacturers on special correlation test programs when new equipment is used or when problems arise.

EPA has recently entered into a long term agreement to purchase electric chassis dynamometers which employ a large single roll. The primary reason for selection of this configuration is its superior ability to duplicate the forces encountered by a vehicle on the road. Currently, EPA tests light-duty vehicles using a hydrokinetic dynamometer with small twin rolls. This arrangement has certain performance characteristics dependent on its unique physical design. Consequently, many vehicle manufacturers use the same model as EPA. As we shift to electric dynamometers, it should be easier to duplicate performance with other machines. With improved sensors and computer controls to maximize accuracy and reduce variability, many dynamometer vendors will be able to

produce machines which meet EPA's published specifications. Thus, vehicle manufacturers will have more flexibility to use alternative equipment and still achieve acceptable correlation.

The initial electric dynamometers purchased by EPA will be used for cold temperature certification and development testing. EPA is planning a test program to compare the existing and new dynamometers using a diverse test fleet. The results of that test program will form the basis for the conversion to electric, large roll dynamometers for emission compliance and fuel economy testing. Regardless of the final outcome, manufacturers will continue to be able to use whatever dynamometer they choose, subject only to the need for acceptable correlation.

While details have not yet been developed, EPA is exploring the possibility of participating in a correlation program with various dynamometer manufacturers. The purpose of such a program would not be to establish EPA approval but rather to promote correlation among the various types of equipment. Jim Carpenter, Chief of the Technical Analysis Branch in the Engineering Operations Division should be contacted for further information regarding this program.

Any questions on certification matters should be addressed to Tom Ball, Chief of Compliance Programs Branch, Certification Division.

Sincerely,

Robert E. Maxwell, Director
Certification Division

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